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What are trees for

– An Ethnographic Study of Local Firewood Practices in
Uganda in the context of Deforestation and Climate Change
Discourses

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- An Ethnographic study of Local Firewood Practices in Uganda in the context of Deforestation and Climate Change Discourses

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Abstract

Interventions and schemes are being introduced all over the world to stop deforestation and reduce climate change. These interventions, on all levels of scale, follow a dominant global discourse based on a human-environment dichotomy and neo-Malthusian logic, and are driven by narratives of degradation by the local population and linear environmental change. Uganda is a country in which these discourses and narratives can be found, and this has had a considerable impact on the village of Teamon. The main intervention in Teamon is a pine and eucalyptus plantation bordering the village that is owned by a Norwegian company. It is a afforestation project under the Kyoto protocol's Clean Development Mechanism, from which Sweden buys greenhouse gas emissions. Other activities include the introduction of energy-saving stoves, seedling distribution and education.

Ethnographic fieldwork undertaken in May and June 2015 showed that the reality in Teamon is not how the body of environmental actors would portray it. Practices around tree resource usage in general, and firewood in particular, is actually dynamic and does not follow a simple linear pattern of consumption and population variations. It follows political, social and personal processes as well as natural changes. Moreover, sustainability is embedded in the firewood practices of Teamon women, following logics of reducing their workload and concern for the future.

There is a discrepancy between the perceptions of nature in dominant environmental discourses and at a local level. Different levels of scale are key to how nature is perceived. While agendas on a global scale are concerned with general tree coverage, the women of Teamon care about their direct proximity. From a global perspective, the value of trees lies in their function as a CO₂ sink, while in Teamon itself their value lies in their local usefulness. However, these differences in perceptions of trees and nature are not neutral. As the study shows, the global perspective and agenda dominate the activities taking place in Teamon, affecting the lives of the local woman. Local women can benefit from the discourses on deforestation and climate change, as in the case of energy saving stoves and seedlings, but the plantation does not inherently serve local people. Instead it serves the agendas of the global perspective, indeed even conflicting with women's firewood needs.

Good and bad ways of using nature are defined from a global perspective based on ideas about the purpose of trees. Often in contrast with what trees are for, for local people.

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1. Introduction

Deforestation and climate change can be viewed from different perspectives. Many of the global schemes for mitigating climate change today are strongly influenced by a simple representation of humans and nature, based on a human environment dichotomy separating humans and nature and where a neo-Malthusian logic, guided by models on population and consumption, dominates (Adger *et al.*, 2001). These global perspectives are found to have a significant influence on how environmental interventions are designed today (Sundberg, 2003), ranging from large-scale plantations to small stove projects (Leach and Scoones, 2015). The local reality and perspective affected by these interventions are more hidden than the global perspectives.

During my visit to Uganda in the spring of 2015, I experienced these global environmental discourses first hand and witnessed how ideas on deforestation and climate change have come together to create a strong discourse on degradation by local people, with several people in Uganda, from the local taxi driver to officials at the National Forest Authority, talking about the seemingly acute problem of forest loss. The main view in Uganda appears to be that local people are the cause of this degradation. In Uganda, planting trees, in particular plantation forestry, is a widely implemented solution to such degradation. Plantations as well as smaller woodlots are a common sight when travelling in Uganda. The focus on mitigating climate change leads to an increased focus on degradation and deforestation (Leach & Scoones, 2015).

One such plantation is Kachung, a pine and eucalyptus plantation owned by the Norwegian company Green Resources (Lyons and Westoby, 2014). Since 2011 Kachung has been certified as a reforestation project within the Clean Development Mechanism (CDM), a mechanism under the Kyoto Protocol enabling rich countries to invest in emission-reduction activities in developing countries. Green Resources sells the emission reductions generated from the tree plantation to Sweden in the form of carbon emission reduction rights.

I visited Teamon, one of the villages bordering this plantation. Apart from the plantation, there were several other activities taking place in and around Teamon with the aim of stopping deforestation and reducing climate change by preventing trees from being cut down and planting new trees. The activities included the introduction of energy-saving stoves, seedling distribution and information about deforestation for example being broadcast on the radio. Green Resources organised some of these activities as a direct result of global

environmental interests, but the activities introduced by local NGOs, national authorities and other institutions are, despite some variations, also clearly influenced by the same meta-narratives and discourses.

This study in Teamon explored local firewood practices due to their significance in the deforestation and climate change discourse. I gained an understanding of local perspectives on trees, and local lifeworlds that are affected by transnational and national discourses and narratives on deforestation and climate change, and of local communities forced to live with the consequences of global environmental interventions, objectives and ideas. In this thesis I intend to contrast the rather simplified and negative perspective of local people presented by global environmental models and narratives with these people's own experiences, practices and perceptions. I will describe how local forest use is dynamic with clear ideas about sustainability, even though local people are experiencing and suffering from the loss of forest. I will present a "thick description" (*cf.* Geertz, 1973) of local people's interaction with forests and trees, transcending the simple representations of them as degraders or incompetent actors. I aim to explore the functions of nature and trees in the local context, and how they differ from dominating global views.

It is vital to study local people's lifeworlds, norms, values, ideas and practices and how they are affected by transnational discourses on society and nature (Boyd, 2009). Dominant environmental discourses need to be contrasted with perspectives other than those used when arguing for environmental interventions. However, the reality is not as simple as two opposing world views and perspectives. Within dominant environmental discourses, there are several ideas and actions, stories and actors and constant changes and struggles. For the purposes of putting forward my argument and stressing the need for a local perspective and understanding, I will create an "ideal" global perspective, for the above-mentioned dominant discourses, forming one body that is also recognised by many scholars (*cf. e.g.* Adger *et al.*, 2001), against which local realities can be contrasted.

2. Research purpose and questions

The purpose of the thesis is to understand local firewood practices in particular and local use of trees in general.

The reason for wanting to understand local firewood use and practices is to compare local lifeworlds and practices with representations of local people and their imagined effect on deforestation and climate change, as well as representations of nature, within global environmental models and narratives.

I focused on firewood, and hence on women, since they cook most of the food and do most of the firewood collection. To understand firewood practices, I was guided by the following research questions:

How is firewood collection socially organised and culturally perceived by the women and why is it like this?

How do women reflect on how they collect firewood and why?

The consequences of these discussed representations will be examined and reasons suggested as to why dominant discourses of deforestation and climate change and local lifeworlds differ in their ideas and perceptions of nature.

3. Theoretical framework

3.1 Human/nature understanding

Nature is something that is physically real, however Castree (2001) suggests that nature can also be understood as inescapably social, writing that “(...) the social and natural are seen to intertwine in ways that make their separation – in either thought or practice – impossible” (Castree, 2001:3).

This means that different actors will understand and act upon nature in different ways. Castree (2001) further writes that “(...) nature is defined, delimited, and even physically reconstituted by different societies, often in order to serve specific, and usually dominant, social interests” (Castree, 2001:3). There are many examples of studies showing the social production and construction of nature. Neumann (2003) describes how the Serengeti national park is a product of colonial ideas about pristine nature in Africa, an Eden not yet destroyed by humankind. Winnebah and Leach (2015) describe how valued characteristics of one specific

place can change over time, depending on the ideas that dominate at any particular time. In the case of now, this would include adding characteristics to a certain place in order for it to fit the carbon market scheme. The way in which nature is interpreted and the functions it has and is supposed to have differ between groups, between different scales and between individuals. Robbins (2003) describes how the same landscape can be interpreted differently depending on who you are and where you come from, as well as on your agenda and the use of nature.

A second part of seeing nature as a social entity is also acknowledging that power is entangled in how nature is defined (Castree, 2001). Some definitions dominate others (*e.g.* Sundberg, 2003). There are different interpretations, relationships, understandings, practices and representations of nature, some of which are dominant, *e.g.* have a higher status and greater impact when it comes to creating policy, politics and action (Sundberg, 2003). Sundberg (2003) describes how some ways of thinking about nature and environmental change are marginalised and silenced due to powerful discourses explaining reasons for, in her case, conservation. Furthermore Basset and Zuéli (2003) describe how local knowledge and experience are being ignored when environmental interventions are introduced.

At the basis of these dominant actions and thoughts is often a claim that knowledge is objective, that they represent the truth (Castree, 2001). Sundberg (2003) describes how especially within the environmental arena there is a search, originating from the natural sciences, for facts, claiming that they are unbiased, objective and value free, even though tremendous work is being undertaken on the social, political and cultural dimensions involved when nature is produced and defined. Robbins (2003) describes how satellite images can be a source of hard fact, but that even satellite pictures can be understood and interpreted differently, depending on who is viewing them. Nightingale (2003) describes how the resolution on satellite images changes how tree cover and a village are understood. Therefore, “remotely sensed data is partial and thus inadequate for addressing social-ecological issues” (Nightingale, 2003:86). Nonetheless, this type of data is still often used as a basis for environmental interventions (Nightingale, 2003). In the constant struggle over inclusion or exclusion of factors in an interpretation of nature, there are choices that are inevitably ideologically charged.

Someone or something that holds the “truth” about nature and the environment also has power over how humankind should interact with nature. It is possible for the truth holder to make

value judgements and decide what is good and bad for nature and the environment (Castree, 2001). Belonging to the group that holds the prevailing truths about nature bestows a certain amount of power (Sundberg, 2003). Making claims about nature or defining it leads to legitimising new or different power relationships claiming land and resources. Basset and Zuéli (2003) say that discourses, dominant perspectives of nature, prevail because they empower certain people. Based on truths, narratives of environmental problems and solutions, global environmental concerns dominate and set the scene for environmental interventions (Adger *et al.*, 2001).

3.2 Deforestation and climate change

Blaming local people for environmental problems, as I experienced in Uganda, is not unique (*cf.* Adger *et al.*, 2001). As Boyd (2009) describes, this representation of local people often forms the basis for environmental interventions. Boyd (2009) describes a case study in Latin America where a forest should be “protected from the people and their destructive practices”. The use of firewood for cooking is an example of a practice viewed as unsustainable, for example being the reason behind desertification (Arnold *et al.*, 2003). Even though case studies such as Benjaminsen (1993) offer another picture showing that mostly dry wood was being used and regeneration was occurring more quickly than consumption, there is still a prevailing image of firewood usage being unsustainable (*cf.* Winnebah and Leach, 2015). Local people are viewed as either not having the correct means for proper stewardship of nature, exemplified by Basset and Zuéli’s (2003) case on the World Bank in the Ivorian Savanna, or are portrayed as victims of international companies or poverty, forcing them to make unsustainable choices while they actually hold the key to sustainability (Adger *et al.*, 2001).

There has been an intensification in the global environmental fight today against not only deforestation but climate change too, and representations of local people as degraders are more present than ever within the environmental arena. Winnebah and Leach (2015) write about how “linear deforestation narratives at the hand of local populations are repeated and strengthened with new force” (p.189).

The narratives of local people degrading their environment justify interventions dominated by global agendas (*cf.* Sundberg, 2003). Agendas determined to stop the alarming and even irreversible problems of deforestation and climate change inevitably leading to crises for the environment and for humankind (Adger *et al.*, 2001), founded on a human-environment

dichotomy separating society from nature (*cf.* Castree, 2001; Sluyter, 2003) and a neo-Malthusian logic following pre-determined models of consumption and population patterns (*cf.* Adger *et al.*, 2001). Considerable focus is placed on trees and tree cover and perceived as important in stopping this degradation (Leach and Scoones, 2015). Several large-scale projects and interventions are supported by the UN to stop deforestation and climate change as part of the Clean Development Mechanism (CDM) and REDD+. Some of them are introduced to protect or plant forest to offset carbon (Arhin and Atela, 2015), aiming at achieving both “conservation and development” (Winnebah and Leach, 2015:189).

There are consequences of these global environmental models and narratives. First of all, carbon projects change landscapes (Winnebah and Leach, 2015) and access to resources (Lyons and Westoby, 2014). Sometimes the result is that resources that used to belong to local people become the interest of others, embedded in overarching environmental discourses. Secondly, approaches to hinder deforestation and climate change within these carbon projects are changing local livelihoods (*cf.* Winnebah and Leach, 2015). In the example of Winnebah and Leach (2015) of a reserve in Sierra Leone, improved fish-smoking ovens have been introduced to reduce pressure on firewood, local people are being affected and need to change. Finally these projects are also influencing general perceptions of nature (Leach and Scoones, 2015). The CDM, as well as other carbon projects, are based on the logic of paying for ecosystem services (Boyd, 2009). By measuring baselines and leakages of CO₂, nature is being turned into an object (Boyd, 2009) and commoditised (Fairhead *et al.*, 2012). The old reductionist view of nature as static and monetary is reinforced. Resources thus become globally owned in both moral terms (*i.e.* due to problems threatening humankind), as well as in actual monetary terms.

A degradation story often follows carbon projects in order for them to be supported or classified as carbon projects (Boyd, 2009). In the case of CDM, an area needs to be classified as not having forest for it to be certified as a reforestation project under CDM. New characteristics of a place are added so that it gains support (Winnebah and Leach, 2015). Therefore, there is a need to simplify nature and environmental change when categorising nature and describing patterns of change limited in time and space. This further reinforces a simple representation of nature as linear and static based on myths about nature, *e.g.* speaking of climax forests and stability (*cf.* Adger *et al.*, 2001). This view of ecology dominates the understanding of nature and environmental change in several environmental institutions (Adger *et al.*, 2001). Measurements and calculations (*cf.* Leach and Scoones, 2015) and

categorisations of forest and non-forest (*cf. e.g.* Robbins, 2003) simplify environmental change, and calculations concerning the reduction in tree cover globally stress the crisis of environmental change (Adger *et al.*, 2001). This perception of nature is illustrated by the example of Sundberg (2003) from a Maya biosphere project that describes how conservationists use a rhetoric about restoring an “equilibrium between humans and nature”, engaging in practices by humans that are compatible with the region’s ecology.

Moreover, explanations and descriptions of nature and landscapes are often based on aggregated material and satellite images. Satellite images are used within CDM for example. As with other data, they are partial and open to interpretation (Nightingale, 2003). Stories about a specific location show another side when local people are addressed in a discussion about environmental change (Nightingale, 2003). The categorisation characteristics used for the material and its perspective naturally change the conclusions drawn from the same data about a particular place (Robbins, 2003).

Global agendas thus restructure landscapes and practices at a local level, and the basis for action lies in particular ways of portraying people, as well as in ways of portraying nature and the values and functions attributed to it. There are of course many discrepancies between discursive simplifications and a wide variety in local contexts and situations (Adger *et al.*, 2001). Basset and Zuéli (2003) describe a case in which the World Bank was fighting against desertification in Sierra Leone, but the authors found no desertification in this particular area to begin with. In that case, as in many others, aggregated data was used, which hid local differences. During the mid-1970s a lively discussion about the so-called fuelwood gap engaged researchers as well as policy makers. The idea was that the demand for fuelwood was simply much higher than the supply, leading to an inevitable forest crisis (Arnold *et al.*, 2003). Even though the theory was highly criticised (*cf.* Cline-Cole *et al.*, 1990), the neo-Malthusian line of thought about a linear relationship between over-population and over-consumption is still present within environmental institutions. Drawing linear conclusions from often complex contexts is more or less impossible. Forest landscape change is not necessarily linear and is often a poor representation of actual social, political and ecological dynamics affected by, for example, war, migration and political instability (Winnebah and Leach, 2015).

It is vital to study local realities too, focusing on local ideas and practices and including a more dynamic view of nature rather than simply using aggregated data and portraying a

simplified, static view of nature and of humans. Global ideas based on misrepresentations of humans and nature have significant consequences (Boyd, 2009) and are used when arguing for environmental interventions. These need to be contrasted when other realities, such as those discovered during fieldwork in Teamon, are identified.

4. Methodology and methods

4.1 Methodological approach

The local reality was empirically studied during four weeks of fieldwork in Teamon, Uganda (see Fig. 1, p.18). The fieldwork was guided by ethnography, trying to understand part of a culture (van Maanen, 2011), firewood practices, and a search for qualitative material such as meanings and reasons, but also an identification of common practices among the women (Robson, 2011). I attempted to capture the women's lifeworlds, a concept originating from phenomenology (*cf.* Jackson, 2013). Lifeworld refers to the experienced reality and everyday world of a human being or group of humans: the social reality and context, lived experiences and consciousness of the person, and how people make sense of what is going on around them. The lifeworld is socially constructed and formed in everyday interaction between individuals in a specific group who are continually and non-reflectively reconstructing it and that is common sense for the person (*ibid.*, 2013).

Following an ethnographic approach and researching the women's lifeworlds, I spent time with women from Teamon interviewing them, observing them, walking with them and participating in their day-to-day activities. Coming from the outside and trying to understand and analyse a culture that is different from one's own is a complex matter (*cf.* van Maanen, 2011). Being from the outside presents both advantages and disadvantages for the study (Bernard, 2011): it makes it possible to notice things that someone from within the culture might not, but also increases the risk of misunderstandings.

From an ethnographic perspective and in the exploration of lifeworlds, there were some methodological risks that needed to be considered. First of all, I spent less time in the field than ethnographic work often requires, even though there are many examples of shorter ethnographic fieldwork (Alvesson and Sköldberg, 2009). A lengthy period in the field is often required in order to become a member of the group being studied and make valid interpretations. I spent a total of nine weeks in Uganda, of which four were spent in Teamon. The time I spent there also limited me to only witnessing a season of relatively high rainfall.

A second risk was that I returned to my hotel in the evenings, which could mean that I missed out on fully understanding the culture. Thirdly I do not speak the local language, which could create a barrier in our understanding one another. All three were risks that could limit my understanding of the culture.

Being aware of these risks, I took several steps to mitigate them. I made several efforts to attempt to understand the women's lifeworlds ahead of the fieldwork and during my time in the field. I read books by Ugandan authors and national newspapers, a tip from Devereux and Hoddinot (1992). I learnt all of the opening greetings and farewells in the local language and never forgot the names of the women I met. To increase understanding between the local women and me, I made sure that the interpretation worked well, among other things by explaining the importance of accuracy and logic to the interpreter in asking similar questions to different women. I followed local procedures when entering the village, helped by an NGO worker at the Agency for Rural Transformation (ART) introducing me to district officials, sub-county officials, parish officials and of course the local council. This enabled me to refer to them when I met the women. I created a good relationship with the chairman of the local council (LC1), explaining to him the purpose of my visit. All of this helped me achieve my objective of entering and becoming accepted by the society. Lastly, returning to the hotel at night might have been a risk in that I did not observe the women's practices in the evening and morning, but it did allow me to reflect on the data collected during the day in a reflexive process (Swedberg, 2012) and move between emic and etic perspectives, which assisted me in analysing the material.

I worked in an explorative manner using an inductive approach. The aim was to see the realities on the ground. I entered the field without any pre-categories for the empirical material and without hypotheses so that I would be open to the existing reality (Alvesson and Sköldbberg, 2009). However, I was naturally affected by pre-understandings from my own experiences since this type of fieldwork is not just about gathering facts (*cf.* von Maanen, 2011). I interpret the situations in the field and then the empirical material. Although my intentions were to be as open as possible, my interpretations would be affected by pre-understandings as well as my background (Alvesson and Sköldbberg, 2009). However, I worked structurally to enable as deep and accurate an interpretation as possible. In order to achieve a solid foundation for interpretation, I arranged to meet with several women, representing a large number of the households, and used varying methods to comprehend their realities.

4.2 Choice of subject, informants and place

To study local reality within the context of deforestation and climate change in Teamon, I chose to focus on practices concerning firewood collection and usage. It was important to understand these practices since they are contested by the dominant global environmental discourses, as noted above. The reason behind this focus on firewood in the usage of trees was that it plays a great part in the deforestation and climate change debate. Firewood use is often portrayed as unsustainable. Many initiatives around the world go against common practices concerning firewood. For example, energy-saving stoves (ESS) are being introduced all over the world as an environmental effort (Atteridge *et al.*, 2013).

I found that it was easy to talk about practices surrounding firewood, asking questions of what, how, when and why. Nonetheless, when discussing firewood and trees with the informants, plenty of information about other related matters, such as charcoal burning, brick burning, cutting down trees for clearing agricultural land and tree planting, also became a natural part of the conversation. Therefore, issues covering trees in general in Teamon were discussed, although firewood usage and practice remained the main focal points.

The informants were chosen in different ways. First, the focus on firewood meant that the informants would be women, since women do most of the firewood collection. However women as such are a heterogenic group, something that had to be considered. Available land, capital and age are all things that lead to different experiences and opinions of firewood and trees among the women. Women with land have more firewood available than women without land who depend on other people or common land. Older women can say more about changes over time than those who have lived there for shorter periods of time. This affects their experience as well as the answers they give. In order to know what to consider when subsequently analysing the material, I always made sure to ask background questions such as whether or not they owned land, and about their activities, how long they had lived there, the size of their household, their wife number *etc.* I obtained general information about their lives, for example business activities, previous locations *etc.* These were the areas I considered when analysing and processing the material and also helped me understand the lifeworlds in Teamon, but they are not presented in detail here. Furthermore I will not be discussing the social relationships, arrangements and gender relations that are part of the women's lifeworlds, but I did consider these aspects in order to make sense of the perceptions of forests, trees and firewood practices. These practices and experiences will be commented on briefly in 5.1 *Background* and 5.2.3 *Trees in Teamon* to paint a picture of Teamon.

The women were not selected beforehand, but were chosen based on a dynamic process. During the first week I met the women by visiting the different household compounds to see if anyone was home. Later I began to make appointments with the women I met when walking around, following the general logic of setting up interviews (*cf.* Bernard, 2011) and ensuring that I was not disturbing them. Walking around the village, I was able to gain an understanding of how the households were geographically located, what the village looked like and where its boundaries lay. Households in different locations were then chosen in order to obtain a geographical spread of informants. This was vital since proximity to the household is an important factor when collecting firewood. When presenting the results, I used fictive names selected from Swedish name days during the month of May, which is when I came to Uganda. Fictive names are used in order to secure the anonymity and thus the integrity of the women in the village, which is also why there are no pictures in the thesis showing the women's faces.

The women ranged in age from 18 to over 50 years old. Some had large gardens, others had smaller gardens. Two women had spent time living in nearby cities. Three of them were widows. All of them farmed and took care of the children. One had just started her family and had only one child, others had several children and also took care of other people's children, often within the family. At least three had businesses: one sold pastries in the nearby centre, one sold farming products and one worked in the village bar and store.

There were several reasons for choosing to do fieldwork in the village of Teamon in Uganda. First of all the Clean Development Mechanism (CDM) plantation is located nearby. The CDM plantation leads to other interventions, such as the introduction of ESS, but also to initiatives promoting environmental sustainability and development in general. After spending more time in Teamon, I witnessed the presence of other actors working with the same agenda. The second reason was feasibility. With the CDM plantation providing the basis for the investigation, I met with ART, which has been introducing ESS into the villages surrounding the CDM plantation. They introduced me to three villages bordering the plantation. Of those, Teamon was chosen due to its feasible size and leadership. There are around 80 households in Teamon, which made it possible to meet with a large part of the village. The leader of Teamon allowed me to work in private without interfering in my work, and without affecting how the women should or should not behave in front of me.

4.3 Fieldwork and methods

There are several aspects to consider when doing fieldwork. The first is how the researcher is perceived, which is especially important to consider in interview situations since it affects the answer given (Bernard, 2011). It is also a factor to consider when trying to enter a culture. Despite its importance, how one is perceived and the effects this has on the empirical material are almost impossible to control. I nevertheless took easy precautions by dressing correctly, for example covering my legs, since it is important to have the right clothing to be met with respect (*cf.* Bernard, 2011). Secondly, I actively worked on creating good relationships with the informants. I met them frequently and regularly so that a relationship was forged and they became acquainted with me. Towards the end of my stay, the village knew me well. A deep personal relationship with the respondents helped stop the respondents from focusing only on my obvious features of being white, young *etc.*

Building relationships serves more than one purpose when doing fieldwork, however. It helps create a second important factor during fieldwork: trust. Having trust enables the researcher to obtain information that is as valid as possible (Bernard, 2011). This was evident in Teamon, especially given that firewood collection can sometimes be a sensitive issue with the village being so close to the plantation. I worked to build trust in several ways by being personal with the women, meeting them several times, and introducing myself carefully. I put a lot of effort into presenting myself, something that according to Bernard (2011), can be a challenge. By doing this I ensured that the women did not feel obliged to participate or to answer all my questions. This sometimes lengthy introduction process contributed to the building of trust. It is also necessary ethically (Robson, 2011). Furthermore I introduced myself to the numerous local leaders, something I could refer to when meeting the women. The LC1 knew when I was in the village, and approved of me staying and doing research there. The relationship and trust that was built up also helped me later when it came to have a better understanding of the material. It enabled me to trust my interpretation and the answers they gave to my questions.

A third aspect to consider during fieldwork was the language barrier since I do not speak the local language. This is of course a disadvantage to general understanding and interpretation of material, since it creates a distance between the researcher and the informant. However, the male interpreter and I had a good relationship and understood each other well. He was able not only to translate the words, but also to translate them to fit in the context of Teamon. Although it might have been preferable to have a female interpreter, since it might be easier

for women to speak freely about their perspectives on various issues without a man being present, I did not detect that his gender in particular affected the women.

As often within ethnographical studies, I used several methods to gather the empirical material necessary. People in general are inaccurate reporters of their own behaviour (Bernard, 2011). Therefore the use of different methods made it possible for me to obtain a good understanding of firewood practices in Teamon. It was possible to confirm or reject information through triangulation. I saw trees and firewood in different settings and circumstances in Teamon, obtaining different inputs and a broader understanding of the practices and usage.

I met with 31 women in Teamon, which is a significant number given that there are *ca.* 80 households in total in Teamon. I met with a further 12 women from a neighbouring village called Bung and two women from another neighbouring village called Abenyonya B (see Fig. 1. p.18). Meeting women in the other villages was meaningful for confirming the results from Teamon, but also gave me a feeling for the surroundings and context. In Teamon I met 19 of the women twice, three women three times, and seven just once during my different activities in the village, which consisted of interviews, focus group discussions, field trackings and a drawing exercise. More than just to build trust, the reason for meeting the women more than once was to make sure that I had understood them correctly when I met them the first time.

I conducted 24 in-depth interviews following a semi-structured logic and using an interview guide (*cf.* Bernard, 2011). As should happen with a semi-structured interview, most of them were scheduled in advance. The interviews lasted around one hour. In-depth interviews are preferable when aiming to acquire a deeper understanding of a specific subject matter. We sat in the shade every time and when possible I arranged the seats so that the interpreter and I did not sit next to each other opposite the women, but rather in a circle. This was to prevent a sense of being questioned or interrogated. Often there were children present as well, but I avoided having the husband present so as to not risk the woman adjusting her answers because of other people. The choice of venue is important since it can affect the informants' answers (Bernard, 2011). I chose a neutral place, without interference by local leaders for example. I used a voice recorder in several interviews, which is good when interviewing since remembering can be difficult (Bernard, 2011). However it is important that the interview object feels comfortable with recording, otherwise it can affect the answers (Bernard, 2011). In some cases, I therefore chose to not use a recording device, instead taking notes with a pen

and paper. The women I interviewed did not seem to be offended, as Bernard (2011) says they sometimes might. Neither the recorded interviews nor the other interviews were transcribed word for word. Rather the recordings were used to supplement my notes and general impressions.

A second method used was asking to see the household's firewood pile after the interview. This proved to be a very useful method for seeing what they use as firewood, and where the firewood comes from. Piece by piece, we went through the pile together and they said where each piece came from. Investigating each piece specifically was useful since it often proved difficult to assess and see patterns in the firewood collection when speaking hypothetically. When going through the pile it became more direct and physical, and it could provide me with concrete answers and evidence.

Thirdly I had three focus group discussions towards the end of my stay when I had more general knowledge about the firewood practices and the women. Focus group discussions have the advantage of meeting more people simultaneously and starting a joint discussion rather than simply asking questions (Bernard, 2011). Focus groups are useful when wanting to find out why people feel as they do, since the group dynamic naturally leads to a discussion of aspects other than those chosen by the interviewer. Instead they are chosen by the group (*cf.* Bernard, 2011). I tried choosing neutral locations for the focus group discussions. The goal was to have around six participants in each focus group discussion who I had already met and talked to. Afterwards I tried to interview the women I had not met beforehand. This was to ensure that I had understood them correctly and to build a deeper relationship. There are advantages as well as disadvantages of having both homogenous and heterogeneous groups. The groups were homogenous in terms of gender and background, which is an advantage since the subject under discussion – firewood practices in Teamon – requires knowledge and experiences of the matter (*cf.* Bernard, 2011). However, in order to get more vivid discussions going with different perspectives on the subject matter, I tried to create more heterogeneous groups by mixing the groups in age and where they lived geographically in the village. They already knew each other – something that is not always preferable (Bernard, 2011) – but Teamon is not a big village so it was impossible to avoid. Bernard (2011) goes on to write that the moderator should not be known to the group, since individual relationships with the moderator then can affect the dynamic. Although I had known the women for some weeks before the focus group discussions, it could not be said that I was a known member of the group in the same way that a local person from Teamon would be. I therefore did not consider

my being known to the members of the focus group discussions to be a disadvantage. Rather I saw it as an advantage: they trusted me and knew who I was, which enabled them to discuss these questions more freely. The difficulty with the focus group discussions was that what the different women were saying was all coming through the single voice of the interpreter. However I felt that he translated well, explaining the different opinions belonging to the different individuals, which I wrote down. The focus group discussions were also recorded which was an advantage when reconstructing the discussion afterwards (*cf.* Bernard, 2011).

A fourth very useful method I used was field tracking in which three of us – the informant, the interpreter and me – walked and talked. I undertook seven of these walks. The women showed me the land where they got their firewood and what they were thinking of using as firewood when they cut specific trees, for example. On four of these walks I also helped cut and collect firewood, which made me a participant. The transect walks also helped me contextualise what had been brought up in the interviews or in the focus group discussions. This method also had the advantage of making the conversation more physical and direct. It was easy for me to ask spontaneous questions that I had not thought of beforehand.

Given that this was ethnographic work, one of the methods of course was general observations when walking around the village and meeting people. During direct observation I observed people's behaviour (Bernard, 2011). I also had one participant activity of cooking and eating food with one woman. The experience taught me how a meal can be cooked and how firewood is used in this daily activity. I also drove around the plantation and the village in a car in order to grasp the size of the plantation and the village's proximity to the plantation and for increased general geographical understanding. Another method used was a drawing exercise in which the women were asked to draw maps of the areas they moved around in regularly (see Picture 1). Even though the exercise did not give very much in terms of actual information about firewood, trees and resource use, it gave me a better understanding of their lives when they drew their different gardens, their houses and their families for example.

Apart from the methods directed towards the informants, I also used methods external to the collection of data for my own understanding, for the processing of the material and for my memory. I took a plenty of field notes, wrote a field diary, took pictures (*cf.* Southwold-Llewellyn, 2002), and regularly typed up a more worked-through document with interviews and observations on the computer. I also drew two maps of the village to help me to remember where I had been and whom I had met (see Fig. 2. p.19). I also used a map from

Green Resources (GR) for the same reason and in order to get a better geographical understanding.

In addition, I interviewed people relevant to Teamon and tree activities. I interviewed one person at the NGO ART that is introducing stoves in Teamon and who is consulted by GR. This is also the NGO introducing the villages around the plantation. I interviewed two people from the NGO Caritas: the director of Caritas Lira and an environmental officer. Among other things, this NGO is introducing stoves and distributing seedlings in Uganda and in the district. I interviewed two GR representatives, one a plantation manager and the other a community relations officer. I talked to a forest guard in a fire tower at the plantation. I conducted one interview with the LC1 of Teamon. I also interviewed the District Forest Officer of Lira, who has been in office for decades, including governing the Dokolo District until recently when the districts were changed. I also interviewed two officials at the National Forest Authority (NFA), one being the local forest supervisor in Kachung for this plantation, and the other the national land management specialist based in Kampala. All of this gave me information and a context setting for Teamon, and provided me with a sense of the discourses and narratives that were dominating environmental interventions. The introductions to the different local and district authorities also contributed to this.



Picture 1. Drawing exercise. By Allan Ocean

4.4 Analysing the empirical material

The process of analysing the material involved going through all the gathered material repeatedly in order to draw conclusions from it. I gathered plenty of material: computer notes and handwritten notes from my fieldwork, a field diary, field notes, some field analyses, a field document with interviews and observations for every day, transcribed interviews and pictures. This material enabled me to remember the empirical material when I returned from Uganda and started working with the material. What was written on the computer was printed out and read through carefully; I looked at and organised the pictures and re-read my field diary. I made quantitative matrixes on the data I had (*e.g.* the number of women experiencing a reduction in the number of trees, the number of women having an ESS *etc.*), and even though it was limited in scope, it enabled me to work with the material and to confirm the patterns I had identified. This in turn allowed me to trust my own interpretation. I started compiling the results quickly as a way to work with the material. It was an iterative process. Both during the fieldwork and when returning home, I questioned my conclusions and the patterns I saw, and I interpreted the results back and forth using different perspectives to support my findings. Eventually, my results were confirmed by the matrix, but also recognised in other researchers' work (*cf.* Tabuti *et al.*, 2003).

For an interpretation to be valid, it is important to have an understanding of the context. As mentioned above, I worked extensively on understanding the larger context. For example I would consider how the conflict with the Lord Resistance's Army potentially affected tree usage, and my knowledge of a tradition of totalitarian authorities helping me interpret stories from officials. On a smaller scale, which was the focal point of this study, it was vital to know the women's backgrounds. My thorough initial work on this therefore helped me understand why, for example, there could be differences in their experiences of getting firewood, due to different access to land, for example. There was however some information that was difficult to comprehend, for example details about who or which organisation was behind a certain activity or intervention, such as distributing seedlings or promoting ESS. Even though this information might have been useful to me, it also demonstrated the positions the women can have as receivers of these activities instead of being responsible for them.

5. Empirical setting

5.1 Background

Teamon is a village of about 80 households located in Dokolo district and Agwata sub-county in northern Uganda (see Fig. 1). The nearest trading centre is a town called Agwata (see Fig. 2). The village has one private primary school. There are also two shops/bars and one Catholic church in the village. The nearest health centre is in Agwata, and it can be difficult for people to travel there. Many people have a radio. There is no electricity, but a few households have solar power. There are only a few cars available. People borrow cars from those who have them or they walk and cycle to travel around. Teamon has a local council, working as the smallest unit of governance at village level. The chairman of the local council is called LC1.

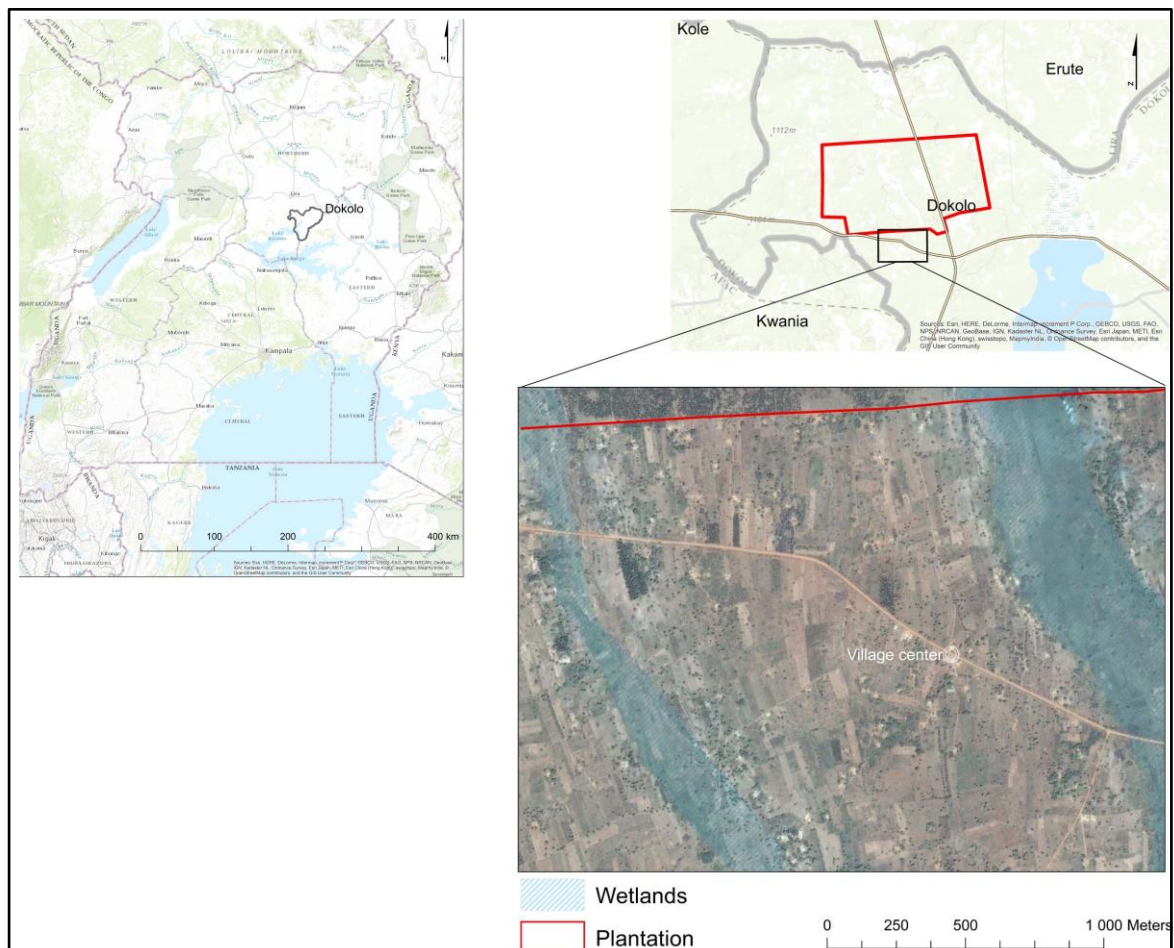


Figure 1. Dokolo district in Northern Uganda. Plantation borders in Dokolo District. Teamon is in the southern parts of the plantation. Seasonal wetlands and plantation border are marked. Source Uganda overview: Esri, HERE, DeLorme, increment, P Corp, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI Esri China (Hong Kong), swisstopo, MapmyIndia, OpenStreetMap contributions, and the GIS User Community. Source Overview Dokolo District: Esri, HERE, DeLorme, Intermap, increment, P Corp, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI Esri China (Hong Kong), swisstopo, MapmyIndia, OpenStreetMap contributions, and the GIS User Community. Satellite image source: Google earth, 29/4-2016.

Most people live in small mud huts. Some households have several of these mud huts divided between children and parents and huts for older boys. Some have brick houses that are a status symbol, indicating that their owners are doing well.

Households have different amounts of land. The land is divided into smaller gardens. Some have land close to them, others have gardens further away and some have gardens both nearby and further away. The wetland (see Fig. 2) is not owned by anyone specific, but is considered locally as a no man's land, where animals can graze *etc.* However some people claim areas of it as their own.

Exogenous marriages are practised so that when women marry they move to their husband's home village. However, two women I met live in the village in which they were born and had land that the family had left them just in case they fell out with their husbands. A man can have several wives and they either all live in the same compound or the man moves between the women's different compounds. The women are responsible for preparing meals, taking care of the children and for most of the firewood collection. I learned that the women's social networks vary but were strong, despite the exogenous marriages. They help each other out, for example working in farming teams. Everyone knows everyone else and despite some unpleasant rumours being spread about one individual, they look out for one other. Husbands and wives perform different roles, but I experienced that in many households the responsibilities are still shared and they often help each other, even though some husbands are heavy drinkers and therefore do not help. The women can decide many things for themselves and have access to the income.

Different activities take place around the village. Subsistence farming is one of the main activities in Teamon. There are gardens almost everywhere in the village in which they often grow maize, cassava, groundnuts and beans, and some grow tomatoes. Some of the women also run small businesses, buying and selling cassava at the closest market in Agwata or selling pastries there. Everyone also has some type of animal. These could be pigs, chickens, cows, goats or pigeons.

During the wet season, August to October, the wetlands surrounding Teamon are filled with water (see Fig. 2). However, during the dry season from December to March, it is dry and there is less water in the wetland.

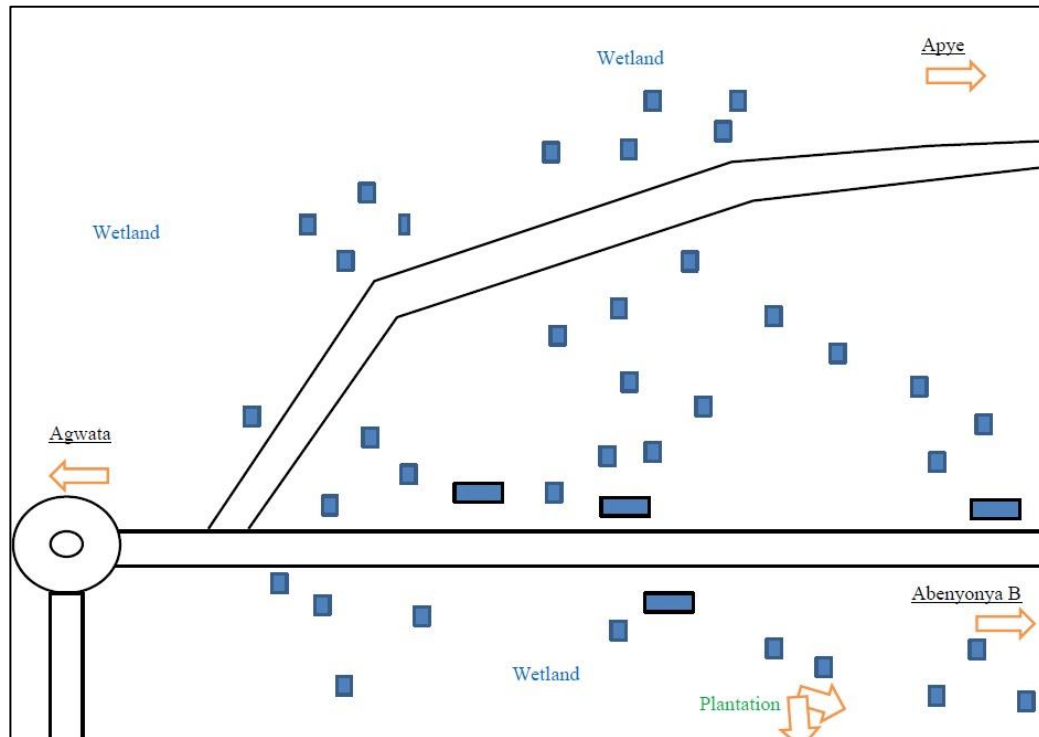


Figure 2. Teamon. Main roads, households, central buildings and directions are illustrated. By Filippa Kavallin Giertha

Uganda has suffered from political instability and civil war. Northern Uganda was afflicted by the Lord's Resistance Army, which was driven out in 2005. The Lord's Resistance Army did not reach Teamon, but people living there feared it and Teamon received many internally displaced persons (IDPs) from other parts of the country. It is difficult to estimate a figure, but the LC1 believes the village population doubled. Many I met housed IDPs at that time. Other IDPs lived in the refugee camp in Agwata. The IDPs were divided between villages and households. It was a hard time, according to the LC1. The IDPs took care of their own livelihoods, he explained, but they also got help from the local residents. Many were day labourers. Some of them burned bricks for a living. Respondents from Caritas and the NFA explained that many of the IDPs burnt charcoal in order to provide for themselves. Today almost all the IDPs have left the village, but some have stayed and begun a new life in Teamon.

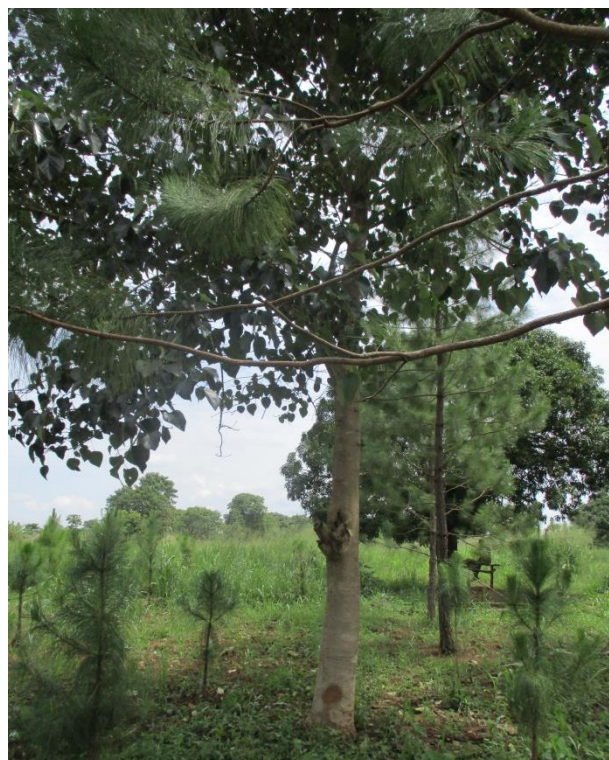
5.2 Trees and forest

5.2.1 Interventions

There are several activities taking place in Teamon by external actors to hinder deforestation and climate change – the most striking example of course being the plantation. The plantation is located in a central forest reserve (CFR). Some of the CFRs originate from colonial times and are state-owned areas set aside for plantation forestry. The state has not managed to maintain the CFRs untouched and the stimulation of private investment is now seen by the government as a key strategy for revitalising plantation forestry and reducing deforestation (Nel, 2015). The government regards private plantations in CFRs as a way of reducing degradation and securing the country's timber deficit (Lyons and Westoby, 2014). For at least two decades, the Ugandan government has aimed to stimulate private and foreign investments in state-owned businesses, including in the forestry sector (Lyons and Westoby, 2014). The National Forest Authority (NFA) is driven by an urge to halt deforestation in the country (Lyons and Westoby, 2014). An official at the NFA explains that the reason the plantation was allowed to lease the land was because the area was so degraded that it was no longer worth protecting. It can therefore now be used for commercial purposes. He went on to describe a common cycle of degradation, starting with people entering the forest and cutting down trees to make charcoal. When the largest trees have been cut down, people start going into the area for agriculture because it is virgin land and therefore very good soil. They subsequently settle in the area.

The Norwegian company Green Resources (GR) started its commercial plantation of pine and eucalyptus in Kachung in 2006 and the plantation was certified as a Clean Development Mechanism (CDM) project “Kachung Forest Project: Afforestation on Degraded Lands” in 2011. They grow pine and eucalyptus for the national and the international market. GR holds a 50-year license in Kachung, which was granted in 1999. It leases 2,669 ha of land, of which about 2,099 ha are planted. The remaining parts are reserved for conservation purposes, or not worth planting yet. The plantation is CDM-certified and Sweden buys carbon emission reductions generated from the plantation. As a CDM-certified plantation, Kachung should also contribute to local sustainable development. According to the company, they do this through hiring local people to work on the plantation and by investing in a number of community development activities. Apart from GR, there is also a regional company, Edola and Sons, which has a smaller plantation within the CFR.

Another activity in Teamon is the distribution of tree seedlings. GR is one actor doing this in Teamon to support local development. One reason for giving out tree seedlings is to reduce the pressure on the plantation forest. GR also says that having a small plantation in a household will improve the long-term economic security of such households as they can get income in the future from selling their trees for timber. Teamon is one of the villages adjacent to the plantation that has received seedlings from GR. GR is nonetheless not the only organisation giving out seedlings nationally and regionally. Caritas, an NGO that is an extensive presence in Uganda, also has a large programme for distributing seedlings. The Director of Caritas Lira said that Uganda is in great need of more trees, speaking in a strictly quantitative sense. Caritas distributes fruit trees and other types of trees for timber. He describes Uganda as previously having an abundance of trees everywhere, but that this has been reduced to almost nothing. He said that people cut down trees because they have no alternative. The District Forest Officer (DFO) also has programmes distributing seedlings and simply also want people to plant trees. The NFA has a large seedling distribution programme too. Millions of trees are to be distributed, according to the objectives of the programme. However, there are also actors distributing seedlings in order for them to be able to buy them back later as timber. When travelling in Uganda, woodlots with planted trees are seen everywhere, including very close to the plantation and in Teamon (see Picture 3).



Picture 3. Pines planted in Teamon from distributed seedlings. By Filippa Kavallin Giertha

A third intervention against deforestation and climate change is the introduction of energy-saving stoves (ESS). GR is introducing these in Teamon and in other villages around the plantation in consultation with the local NGO Agency for Rural Transformation (ART). The new stoves are intended to replace the three-stone stove that is used locally. Apart from reducing the need for firewood, and thus reducing pressure on the plantation (*i.e.* reducing leakage) and mitigating climate change, the stoves contribute to improved indoor air quality and reduce the time women spend on finding firewood. The stove is made out of mud and dung, the same material that is used to make houses, and thus easily accessible for the women (see Picture 4). As with the distribution of seedlings, GR is not the only organisation trying to convince people to adopt ESS in the area. The women in the village also talk of being taught by students. Caritas also works in the region teaching women how to make an ESS with the objective to reduce deforestation and save trees. The DFO also has ESS projects in the region.



Picture 4. Energy-saving stove made of mud. By Filippa Kavallin Giertha

In addition to these practical engagements in reducing deforestation, there are a number of educational activities that aim to make people change their practices and thereby reduce wood consumption. The NGO Caritas has educational programmes in which they talk about climate change, how it will result in less rain and other changes in the weather, and how it will affect women. The DFO also frequently broadcasts on the radio, encouraging people not to cut down trees because if they do they will have nothing to use in future and the outcome will be bad weather.

The above-mentioned initiatives of plantations, seedling distribution and ESS stem from a larger set of global ideas. A similar rhetoric can be recognised in all of the above-mentioned institutions in Teamon. In conclusion, these institutions, from the NFA and GR to NGOs and the DFO, all see local people living in villages like Teamon as degraders. As the DFO puts it, local people are destroyers who are not capable and do not listen. The DFO tries its best to teach them but fails, according to the DFO. The same motivation can be found in Caritas, although they use a narrative of poverty forcing people to be unsustainable. None of the actors wants there to be fewer trees, and in order to achieve this, the local people must adapt to new practices. This view of local people, as well as the need for more trees, is also what legitimises the work of GR and the CDM plantation. The actors and the discourse share the aim of increasing the number of trees and tree cover in strictly quantitative terms, regardless of its use for local people.

In different ways, these actors are affecting the realities of local people in Teamon because they are affecting part of the women's firewood landscape. I will now examine some of the effects of the interventions.

5.2.3 Responses to interventions

Activities taking place within the CFR and in the plantation are not explored thoroughly here¹. Other scholars have studied some of the consequences of the plantation (*cf.* Lyons and Westoby, 2014). When it comes to firewood, not everyone used to go to the CFR to collect firewood before it was a plantation so only the women living close to the forest have been directly affected. The plantation could provide firewood when the plantation is thinned out. However, generally, there is confusion about the rules on accessing the forest, for example to collect firewood. Some women believed that they can collect dry branches in the plantation. GR confirmed this, saying that they do allow the women to take leftovers after thinning out. LC1 said that he is notified when there has been thinning out in the plantation, reporting this to the women. Other local women said that they can cut firewood from the trees growing between the trees in lines, but not the planted trees. Some women however believe that they

¹The NFA official in Kampala described how local people started claiming parts of the land of the plantation without it being possible for them to have proper access to the area. Teamon's LC1 in turn described how people had different activities in the CFR before the plantation was introduced. He says that the land was good and that people burned charcoal there.

are not allowed to collect in the plantation or they do not go there because they are scared of the guards.

However, all the women said they have to sneak into the forest. Women are worried that the guards will seize their axe and *panga*² if they see them entering the forest. However, some said that if the guards are local (Teamon or neighbouring villages) they let you pass, but tell you to hurry. Moreover, the guards themselves had a propaganda sustainability agenda of their own. For example they told Charlotta: “If you cut now, what will you use in future?” Another woman, Vanja, also told me that she found that the “forest people”, referring to the guards, are getting tougher. She did not think that she will collect firewood from the plantation in future.

Highlighting this concern, is that on two occasions I myself was also questioned on my background and motive. I felt that the women were concerned that I was asking questions about firewood, suspecting that I might be from the forest company and trying to establish if they were trespassing. The same women afterwards also wanted to explain to me why they did not feel that it was right for them to be excluded from the forest. Another woman asked why I wanted to know all these things. “We women need our firewood,” she explained, wondering if I was from some authority. It was clear that the women were concerned about not being allowed to pick firewood freely in the forest.

There was also confusion among the women of Teamon about who ran the plantation. Some believe it is the government. Most of the time, the women referred to some forest authority in general. There were also difficulties in understanding which forest plantation the women were referring to: whether it was the GR plantation, the smaller one run by Edola and sons or the conservation area. This could be a sign that the forest is not that significant in the women’s lives, but research shows that misunderstandings are often present in carbon projects (Leach and Scoones, 2015).

Seedling distribution was evident (see Picture 3). Pine woodlots are not uncommon in Teamon, nor are single, planted pine trees. However, there seems to be an uneven distribution, even though it was not always clear where the respondents were getting the seedlings. GR stated that there is a cycle for distributing the seedlings, combined with an assessment of the receiver’s capabilities. Lotta, for example, had a lot of trees and received more seedlings for showing interest, whereas Carina only received five seedlings. It was evident that the exotic

² Machete

trees distributed as seedlings, such as pine, are new for the women. Vanja said that she is now trying out growing pine with cassava. Carina planted pine trees that died quickly. She said that the trees died because the people who distributed the seedlings did not come and follow it up. Several of Monika's pines also died.

Many of the women I met had some sort of ESS. 13 people I met in Teamon had an ESS, nine did not, and for the rest there are no details as to whether or not they had one. There were different reasons for deciding whether or not to have one. The 13 women who had an ESS all said they had one in order to save firewood. They are also less sooty. Some said they enjoy the possibility offered by a mud-stove of cooking several meals at once. However all the women who had an ESS also had an ordinary three-stone stove. When they needed to stir strong and hard they used the three-stone stove. In general views about the ESS were not negative, although some women said it would cost them money they did not have. Whether or not this is true was hard to assess without being too intrusive. Several women had their own model of ESS, either dug into the ground or built using mud, having been inspired by some they had seen in town when people were brewing gin, for example.

In general it was clear that many women had adopted the rhetoric from the general deforestation discourse. Jane, for example, told me: "There will be no rain if they cut down the trees".

5.2.4 Trees in Teamon and basic firewood practices

Trees are an important and central resource for lives in Teamon and have a full range of functions. Trees are resources that can be bought, internally in the village or externally. People can choose to buy a whole tree, or parts of a tree, like Sonja who bought a branch from a tree. Trees are also planted by numerous households. They can be planted from seedlings that have been distributed to them, seedlings that have been bought, by moving seedlings from one place to another, or by having them in a nursery. Some households grow just a few trees, others have big plots where pine is grown, such as the LC1 and Yvonne. Often trees are planted to be sold for timber.

When trees are cut down they can be used as construction material, timber or firewood. The firewood is often used for cooking, but also for smaller businesses. Vanja, for example, sells pastries in the nearest shopping centre that she cooks with firewood. However, firewood is also used to burn bricks and charcoal. Burning bricks is quite common in Teamon. It is done in order to sell the bricks to pay school fees, as Veronika explained, but also to construct your

own house, as Annette did. Burning charcoal, however, was not an activity that I came across in the present study of Teamon, although it is said to have been a common practice. One woman had been burning charcoal a lot, but stopped for numerous reasons including health and being cheated by the middleman. Another woman I talked to tried it once but did not like it.

People in Teamon had several different strategies for the regrowth of trees, as will be discussed in Chapter 6. Despite this, many have witnessed a decrease in the number of trees, and this has had an impact on their daily lives, routines and practices. The women said that there are fewer big trees now than there used to be. The women have experienced deforestation in that they all perceive there to be fewer trees now than previously. The time period they are referring to as “previously” is unclear. Examples of changed firewood practices were that the women said that they “didn’t used to go to the wetlands”, they “didn’t have to stack firewood”, they “didn’t cut fresh trees/branches to collect firewood before”, but now they do since “it’s the only thing there is”.

Turning to present practices concerning firewood, it is collected by women and children. When they collect firewood they go out with an axe and a *panga*. When carrying firewood they make a bundle that they tie and then carry on their head. They mostly look for dry branches and trees, but sometimes also cut fresh.



Picture 3. A drawing by a woman in Teamon illustrating firewood collection and use, showing the cutting of dry branches, the use of an axe and a panga, and the blowing necessary when using a three-stone stove

Most of the firewood collection takes place during the dry season. It is a time when there is lots of activity going on with many women collecting firewood. Most people go to the wetland, considered to be a no-man's land, to look for firewood. Marit described how they sometimes decide on a time to meet and go together or they just meet in the wetland. They mainly look for dry firewood but also cut fresh trees. Some women go once, twice or three times a week to collect firewood. Some women also go to the forest for firewood. Marit said that she sometimes goes to the forest where trees are planted in lines, but that she also goes to where there is natural forest. In the plantation, she cuts the trees growing between the planted trees or takes the big dry branches already cut by people working in the forest.

Firewood is also collected continuously throughout the year. It is not possible to cut everything for the whole year during the dry season. It is collected in your own garden, in someone else's garden, on route between gardens or in the wetland. However, when it is not the dry season, Sonja said that they do not go as deep into the wetlands as they do during the dry season. Whenever they see something that can be used as firewood or when they run out of it, they collect firewood. Some have more firewood left from the dry season than others; some have completely run out of it when the wet season comes. Hence, throughout the year, there is a continuous search for and collection of firewood. For example, Monika showed me trees and bushes that she had wanted to cut for a while; however her axe was not sharp enough at the time. Firewood collection is an ongoing process, which was also evident when Monika and Yvonne brought some firewood home while we were out walking together. There are also bushes that you can return to and use as firewood several times.

The direct geographical proximity divided the women in where they collected firewood. Women on different sides of the road went to different places to collect firewood, hence different wetlands (see Fig. 2). It was also only the women on the forest-side of the road who either collect or have been collecting firewood in the forest. Marit, for example, mentioned a garden where she can collect firewood, land owned by her husband with whom she had fallen out, but she stills preferred walking around to gardens nearby, asking friends and relatives for permission to take firewood from there since the other garden is quite a long way away.

When fresh trees are being cut, they are cut with an axe. With a *panga* you can clear branches from the tree. When a fresh tree is cut for firewood, the women cut it leaving a high stem,

around 70 cm. This is to enable the tree to grow back on the existing stem. If you do not want a tree to grow back, you have to cut it differently, something Linnea said is hard work. If you cut a fresh tree you have to leave it to dry before you can use it. You can either leave it to dry where you cut it or you take it with you to dry in your garden. You can split it before or after it has dried. Vanja splits it early so that it dries faster. It needs to be left to dry for between a few weeks and a few months, depending on the species and size.

For cooking purposes, the women also use whatever is available; for example Linnea was using an old chair and Monika an old ladder. Monika was also using sticks that the household used when harvesting beans. Another common resource to use during the wet season is palm bark and cassava stalks. Off-cuts from timber are also a common source for firewood. People mostly use whatever is possible as firewood. Vanja cut down a branch that was leaning towards the house. Both Beda and Sonja had firewood from agricultural land they had recently cleared. Nonetheless there were both sizes of firewood and species that were preferred due to different characteristics. Lastly, firewood can be bought. Only two women I met bought some of their firewood, and they were wealthier than most of the other women. One of the two women explained that the firewood was bought from people from Apye (see Fig. 2) passing by to sell firewood at the market in Agwata.

The women mostly use the firewood to cook food when firewood should be dry. The most common stove was the three-stone stove, which consists of three large stones on which the pan rests with a fire underneath (see Picture 5). The three-stone stove is often outdoors, but is moveable so it can also be used indoors when it is raining. Vera showed me how this is done when we cooked together. She had one piece of firewood that was still glowing from the day before. She blew on it to make it burn more, put some grass on it and then some smaller sticks. She also used the palm cover. Many also have some sort of ESS. Some have been taught by outsiders how to build a stove, and some have made their own variety. Sonja had one that was a dug hole in the ground in which firewood is placed. Sofia had a mud stove with three possible holes to cook on. When cooking on a three-stone stove, the user has to blow more than when using a mud stove. Charcoal, which can be bought, can also be used to cook with. Marit and Carola sometimes use charcoal to prepare food and thus have a special charcoal stove, a type of ESS made out of mud.

Cooking creates a very smoky environment, even with an ESS. However, Marit found there is less smoke when she uses an ESS but the smoke stings your eyes. Linn, however, said that

she is an African woman and she can take it when I asked about the discomfort caused by smoke.

The time taken to prepare food differs depending on what is being cooked and for how many. Carina could explain precisely how much palm cover it took to prepare different meals, such as vegetables, porridge *etc.* Linn, who has 30 people to cook for every day, spends most of her time in the kitchen. The time taken also depends on the stove used. The number of times people cook per day differs. During the wet season people cook less, often two to three times per day since they are often busy working with the garden. People cook more often in the dry season. Some also only cook once a day to reduce firewood consumption.

Firewood was also used for other activities. Many women brew the local gin *waragi*. Sofia mostly uses the palm cover to brew gin. Vanja sells pastries in Agwata and uses firewood to bake them. Yvonne said that she heats water for them to wash in. People also have a fire outside to gather around when telling stories.

Lastly it is important to describe that the women were of course different and had different prerequisites when it came to firewood. There were social structures, organisations and socio-economic differences that had an impact on the reality.

Labour availability when getting firewood is one of the things that differed between households. Vera, who suffers from HIV and was also pregnant at the time, has difficulties walking to find firewood and therefore only has some cassava stalks. Astrid has liver disease and also depicted difficulties in collecting firewood. However both of them have people around them who can help. Having a big family means that more people can help gather firewood, but then on the other hand the total consumption of firewood is also greater.

Land control was another factor. Yvonne, who has quite a lot of land controlled by the household, showed me several possible sources of firewood for her to use. She has firewood available whenever she wants it. In contrast, Rita, who has very little land, has more difficulties accessing firewood. Rita does most of her firewood collection in the wetland and still has a relatively large amount left from the previous dry period. Undoubtedly the wetland is an important source of firewood for her. People with less land can ask to collect firewood from other people's gardens, as Marit does. Marit walks around asking and most of the time people let her take some firewood, but sometimes they say no.

There are some differences in firewood practices, but the major practices are shared. With these shared practices as the background, the focus can now shift to contrasting and comparing realities in Teamon with the dominant environmental discourses described in Chapter 3.



Picture 4. A firewood pile with palm bark. By Filippa Kavallin Giertha

6. Another local reality

6.1 Dynamic nature and its dynamic use

In the women's relationship with nature, nothing is static: trees come and trees go. The perceptions, norms, values and practices are set in a political, cultural, structural and personal context. These processes change how trees are being used. It is a dynamic relationship.

The first sign of the dynamic ways of using nature is the importance of seasons. Both social and natural phenomena are behind the different usages of trees during the seasons. During the dry season labour is available, both due to children being on holiday from school and therefore able to help, but also since there is less garden work in contrast to the wet season when there is a lot of weeding and digging required. Firewood is collected during the dry season so that there is some when the rain comes, as Sonja said. This is also why most of the brick-making is done during the dry season.

Physical and natural factors affect firewood practices. There is less water during the dry season, making the wetland (see Fig. 2) available for searching for firewood. “In the wetland during the wet season you do not go so far, when it is dry you go further,” as Sonja explained, due the rising amount of water. Connected to this is the fact that during the wet season, snakes such as cobras are in the wetland, and therefore it is safer to go there in the dry season. Another very common reason, mentioned by Sonja, is that during the dry season there are fires³, making it easier to enter. Trees that are burned are also easy to pick and use as firewood.

These factors are part of the rhythms of the women’s practices. One practice is to stack firewood, and collect as much as possible in the dry season due to the difficulties in collecting during the wet season. Another is that it is more important during the wet season to find dry firewood since there is less time for it to dry when the firewood collected from the dry season has started to run out. Veronika and Carola buy firewood during the dry season since they know how difficult it can be to collect firewood during the wet season.

Another factor showing the dynamics is in the way the women talked about and used the fact that trees grow back (see Picture 6). Regrowth is a natural part of how they live and use tree resources. The women all have a strategy of leaving a high stem around 70 cm when cutting down a tree to enable it to grow back, unless their intention is for it to not grow back. Karolina told me that when leaving a high stem, she can return to the same tree after three to four years and use it again. On my field-tracking I was shown several bushes that the women could return to over and over again. Yvonne has several of these bushes and she waits a few years before returning. Annette explained how she has used many trees around her homestead for making bricks, so she is now struggling to find firewood. However in a few years, she explained, the trees would grow back to be a suitable size for use as firewood. Similarly, planting trees is part of a natural way of living your life – regardless of whether the seedlings were distributed to you or not. Trees are planted if it is possible and if it is in a person’s interest. Seedlings can be bought or, as was the case with Monika, seedlings can be moved from one place and planted on a homestead.

³ Fire could be fires that are lit, which are illegal, but also wildfires, according to the women



Picture 5. A tree re-growing after being cut down. By Filippa Kavallin Giertha

Changes in practices are evidence of the dynamic relationship with nature. One major change in the use of trees in Teamon is the decrease in charcoal burning, as several women explained, but also mentioned by the LC1. None of the people I met burns charcoal now. Two of the women I talked to used to do it, as explained earlier. Vilma did it a lot but stopped because of health issues and because she was cheated by the middleman. Sonja tried it once, but did not like it since it was hard work and smoky. This change is one example of how political dimensions affect the use of natural resources in general, but trees in particular. As explained earlier, Teamon hosted internally displaced persons (IDPs) during the war. Respondents from NFA and Caritas explained how charcoal burning was one of the main livelihood activities among the IDPs, since there was no other real alternative income-generating activity. Linnea's story was in line with this, explaining that the practice of charcoal burning originated from when people were visiting Agwata, the neighbouring town with a refugee camp, and they saw other people do it. Moreover, the war also caused other responses in how nature is used. Mona explained that many people cut and burnt down trees to be able to see guerrillas

hiding in the bushes. The official at NFA Kampala confirmed this, but also added that people took advantage of the situation just to be able to burn trees.

Many of the women said that it was this practice of charcoal burning that caused the greatest reduction in trees. They explained that large trees are used for charcoal burning, and hence large trees have disappeared. The larger trees' role in firewood availability is their branches, particularly dry branches. In terms of this change, some women feel that large trees will return. Annette is one of those. However, some people doubt this since they are cut down before they are able to grow. The use of trees was probably less sustainable when Teamon was hosting IDPs due to the IDPs perhaps not having the same incentive for sustainability, but also issues of poverty *etc.*

Another change showing the dynamic relationship with trees is how the wetland has become a main source of firewood, a role it had not previously played. Beda remembered a precise year when she started going more to the wetland. The time when people started to collect firewood in the wetland is not clear though; the way Linnea described it, it was more of a process relating to when the wetland became more important for agriculture when growing rice. Sonja explained that the wetland was not used as agricultural land before. "It is not common practice to grow rice here," she said. Since rice has been planted, people have started to go to the wetland more. Firewood becomes available and accessible when the wetland is being cleared, but the wetland also becomes a usual place to be, part of the area in which people spend time.

A second reason as to why the wetland has become more important could also be that there are fewer trees in the village. Linnea explained that firewood was so common before that its collection was not even divided between gardens. People could pick firewood and branches from everyone and everywhere since there was such an abundance of trees and bushes. The wetland is a "no-mans land" and thus in general terms accessible to everyone. Charlotta described how there are differences within the wetland as well. She said that the best species for firewood are now deep in the wetland, so she now goes deeper into it.

The reduction in the number of trees and thus in firewood availability in turn has had its effects in practices. One way was to reduce the consumption of firewood. Carola for example has decided to cook just once a day so that the food she makes only needs to be heated. Using

an ESS is another way of reducing consumption. Planting trees is another way to deal with the problem. Even though the main reason for planting trees is not for firewood purposes, Sonja for example mentioned what should be done about the reduction in available firewood in the same sentence, and planting trees still provides some firewood.

6.2 Values and functions of trees

In the interventions (*e.g.* plantation, seedling distribution, ESS introduction, education) taking place in and around Teamon, trees have the function of limiting climate change and deforestation. This simple and one-dimensional role given to trees in these interventions is representative of the role trees are given in many of the global models on climate change, such as in CDM plantations when tree cover and resulting carbon emission reductions are the only dimensions of trees that are valued (Boyd, 2009). In contrast, within the local lifeworlds in Teamon described here, trees have many different functions and are prioritised and used differently, depending on their characteristics and the needs and interests of a particular user at a particular time.

Trees play very many roles in the everyday lives of the women. Trees are sources of money, firewood for cooking, material for construction and brick making, and provide shade, windbreaks and fruit. Some play traditional roles in just being kept. For example, the mango tree is important during the wet season. After working hard in the garden and when people barely have time to prepare food, mangos are a perfect dish during brakes. Therefore mango trees are seldom cut down and almost never for firewood alone. Mango trees also produce thick shade and serve as a windbreak.

In general, trees that play important functions or that can be used for something other than firewood are not cut for firewood. This was evident when Yvonne and I were walking around. She pointed at a tree that she would use as firewood if she needed it because it does not contribute to anything else. Yvonne, who has planted pines, will use a pine that was destroyed by her cow as firewood since it will not be possible to sell it for timber. Furthermore, at Karolina's place there was wood that looked like firewood to me, but it had been used for construction and since it was still strong they would use it for construction again.

Instead firewood is often a by-product from trees that need to be cut anyway. There were many examples of this. Linn cut down a quite big tree that was shading the garden and used it as firewood. In Vanya's firewood pile there was a branch that had been falling over the house.

Sonja would use the trees and bushes from agricultural land they had cleared as firewood. Monika used an old ladder. Branches from thinning out trees were also commonly used as firewood and cassava stalks were often used during the wet season.

Prioritisation between different trees was evident, with firewood often having a lower priority. Several of the women have planted trees, but they were not primarily planted to supply firewood. Trees are planted hopefully to be sold as timber and earn some money. Tall, strong and straight trees are therefore for timber since they will give a return. Brick burning is another activity for earning money, but bricks are also something for constructing people's own homes. It is also possible to sell trees suitable for brick making, as Linnea did. Trees suitable for brick burning are therefore not used as firewood either if people are engaged in this activity. Another function of trees is for construction. Trees suitable for construction are used for this and not for firewood.

Not all trees or branches are suitable for these other functions. In contrast to these usages requiring trees with specific characteristics, firewood for cooking can be taken from more or less anything, despite potentially leading to some discomfort. However, the priorities are not always stated. Annette said that next time she would prioritise firewood over brick burning, and hence not wait for trees to grow as large as would be required for brick making. The reason for this was that she uses firewood for cooking every day, she explained, while brick burning is mostly done in the dry season.

Trees can, however, also interfere with other interests in the women's lives. Some trees, especially the *malaina*, give such a thick shade that nothing can grow under it, therefore trees in gardens are often thinned out or cut down. "Trees are growing just everywhere, so you have to keep on clearing the same garden over and over," as Beda showed me. Local accounts made it clear that it is not easy to deforest an area. If you do not want a tree to grow back, it takes a lot of effort to stop it from doing so. The trunk needs to be burnt *etc.*

6.3 For the future

The women stated that there is less firewood available now than in the past due to there being fewer trees, and they all said that collecting firewood is hard work. When I say, for example, that "there are a lot of trees here", they practically laugh and say that it is nothing compared to how it used to be. It is their direct reality and life that are affected by a reduction in trees in the surroundings of the women. As Carola says when I ask how she will manage to get

firewood since she was out when I met her: “It will be hard, but I am a mother and I have to feed my children”. The reduction in the number of trees has taken a different turn from how it is presented in the global models and narratives. The threat is against direct resources and livelihood use, and disappearing trees directly threaten the future survival of individuals.

The reduction in trees has affected the practices of these women. Linnea said that in the past it was not necessary to pile and stack as is done now during the dry season, since in the past there were so many trees people could just pick all year round. As mentioned above, there has been a change in where it is collected from, from their own garden or in the wetland for example. Now the good species for firewood are in the wetland. They also say that now they cut fresh branches since dry branches are harder to find. The most preferable species are also hard to find now – they are only found further away or as very small types, according to Charlotta. I asked them how they manage in that case. The reply was: “You just look harder”. The same reality was expressed when Yvonne described how, “You get stuck”. If this is the case, this can be used, she said pointing at low-quality firewood. Some also cooked less to reduce the consumption of firewood. Planting trees also offers an answer to what should be done. Using the ESS is another strategy. Or, as Carola explained, she buys firewood from the neighbouring village since it is so difficult to get any nearby. Due to this direct effect of a reduction in the amount of trees, the sustainability perspective is embodied in how the women use the trees for firewood and how they perceive trees.

Having strategies to conserve trees is something necessary for now, but also for the future. The women have an interest in the number of trees not decreasing. Practices of leaving trees for the future are evident. In a focus group I asked why not all the trees are cut down. The women laughed at me. “You cannot cut everything down,” they said. “Why not if you need it?” I asked. “We have to keep trees for the future, for the children” they replied, pointing at Rita’s baby. Another reason is, as Maj mentioned, that she had noticed a decrease in rain, something she believed to be related to tree loss.

The idea of keeping resources for the future is embedded in the practices of the women. Everyone makes trees grow back by cutting high stems. The future and how it is a part of the women’s lifeworlds is also evident when they speak about people from outside Teamon leasing land or buying trees. The women suggested that perhaps these people would cut down trees and not leave stems since they have no interest in stems being left for the future, in contrast to themselves.

“I think people should plant more trees,” said Sonja when I asked her what she thought about the fall in the number of trees. Regardless of its function for firewood, planting is therefore a way of having more trees in the village. Monika also explained: “I can’t control the others collecting firewood, but I make the trees grow back, in the wetland too”. Furthermore, in a discussion, Carola even stated that it is good to leave an area where trees should not be cut down so the trees can grow large there.

Many of the ways to conserve trees are also logically incorporated into the firewood practices. Looking for and working with firewood is hard work, and the women strive to limit their workload: using what is easily available, easily accessible, easy to use, and what is already available, often irrespective of the quality of the firewood. One of the strategies for this was the search for dry trees and branches. “If you are lucky you find dry ones,” said Vanja. Dry wood is good since it can be used straight away, which is especially important during the wet season when there is less time to wait for it to dry. Vanja showed me two dry trees that they would use; both had been attacked by worms. Yvonne was gathering dry branches when we were out together. When using fresh trees or branches there is a need to wait and clear it and cut it into pieces.

Hence, there is no wastefulness in firewood use, even if the quality of the firewood is affected and some discomfort is caused. The firewood used is therefore easily available palm cover that is falling from trees in their gardens, coconuts falling down by themselves, pieces of wood already cut down, old chairs, ladders, easy available cassava stalks *etc.*

Regrowth is therefore also an important way of making the search for firewood easy. People know where the stems left are and can have bushes left for regrowth in their own gardens. It is good to have firewood material in gardens since it is nearby. Ingeborg had Yellow Cassia planted in her garden, as did Vanja. It is not very good as firewood, Ingeborg explained, but it grows very fast and works, so when you are short of other firewood you use it. As mentioned above, on my field tracking I was shown several bushes that the women could return to over and over again. Yvonne had several of these bushes. She waits some years before returning to each bush. It is also exemplified with a tree that Yvonne said she might cut down completely, but on the other hand it is also good to have a tree that you can return to and cut down the branches.

Discussions about size also showed how sustainability is logically embedded in their practices. Beda's use of a large log for firewood that she cut down because it shaded the garden, illustrates the sizes feasible for use as firewood. The log was too large for her to use, and would take a long time to dry, so she started by using the bark, and then "slowly slowly" as she put it, took pieces from it. It was a lot of work., I also asked Yvonne about a tree that she said she might use as firewood. It was very large. She said that it would mean a lot of work, and it would provide firewood for a long time. Logs that are too large are even left in the wetland since it would take a lot of work to bring them home, as Veronika explained. Firewood should instead be easy to split, said Vilma. Large trees are not feasible, however, but too small branches also have their disadvantages since they splatter and require attention and blowing, making the kitchen sooty.

Lastly, there are culturally charged reasons as to why trees are not cut down. In a focus group discussion, the women talked about some trees that are not supposed to be cut down. The big palm tree was one of those. Sonja moreover pointed to a tree saying that they simply did not cut down that type of tree, but she did not know why.

7. Discussion

7.1 The local complexity

What is shown in Teamon, as in other case studies (*cf. e.g.* Basset and Zuéli, 2003; Boyd, 2009; Nel, 2015) is that nothing is as simple as the dominating narratives about climate change, trees and local people's role in this suggest. There are significant differences between discursive simplifications and local realities (Boyd, 2009; Adger *et al.*, 2011). In Teamon the firewood practices and uses of trees have changed over time and space, with the women adjusting it for social, political and personal reasons. For example, during the war, trees filled the function of burning charcoal as a way of earning a livelihood. As shown in Teamon, women have many ways of dealing with changing circumstances as well as a reduction in firewood availability: using energy-saving stoves (ESS), working harder to get firewood when using fresh trees, cooking less *etc.* These responses are also shown elsewhere (Arnold *et al.*, 2003). A narrow description of people, as in the case of the fuelwood gap model calculating population decreases/increases and consumption, is misrepresentative, as seen in Teamon with several local responses to environmental change for example (*cf.* also Cline-Cole *et al.*,

1990; Arnold *et al.*, 2003), and secondly larger families often use less firewood per capita (Arnold *et al.*, 2003). Portraying people as having static consumption is misleading.

Even though the women also witnessed a decrease in the number of trees, there is more to this change than the current climate change and deforestation narratives driving interventions in Teamon make it out to be. This is similar to how Adger *et al.* (2001) describe global conventional discourses on the environment as often being irrelevant for explaining local environmental change. There are many complex explanations to forest cover changes, and as I have described in this thesis, these are not only connected with overpopulation and overconsumption by static natural resources.

More than merely simplifying people, the dominant discourses on degradation and climate change at the moment also portray nature and the forest as simple and static, which has been highly criticised by many (*cf.* Adger *et al.*, 2001; Nightingale, 2003; Robbins, 2003; Fairhead *et al.*, 2012). My ethnographic work from Teamon shows that changing nature is part of the lives of the women of Teamon. There are times when there are fewer trees, exemplified by the time after burning a lot of bricks, but the trees will return and then it will be easier to get firewood again.

This field study, like others (*cf.* Benjaminsen, 1993; Arnold *et al.*, 2003), show that there are also actual misrepresentations of local people as unsustainable and environmental degraders. Without the need to show local people's *innocence in the crime against humanity* or as *victims* of poverty or being the *natural guardians of the environment*, which several studies touch up on (*cf. e.g.* Basset and Zuéli, 2003), it is still important to state that the local people in Teamon are not simply degrading their environment, but have established strategies to ensure a future that still features trees. My study shows several examples of practices to ensure a future supply of wood. There is no wasteful firewood use since wastefulness conflicts with a way of life and it saves time and work. It would be stupid to waste the resources on which you depend. The threat of deforestation for the women in Teamon is in contrast to what it is found on a global scale. There is nothing vague or symbolically transformed into CO₂ but it is present, direct and precise. Currently this threat in fact comes primarily from the plantation, which from the perspective of the global narrative is there to conserve trees.

7.2 The importance of perspectives

The discrepancies between the practices and lifeworlds in Teamon and the global models and narratives on degradation and climate change can be understood by understanding different perspectives on nature, how it is interpreted and understood (Castree, 2001). In the case of environmental problems, the scale is important (Adger *et al.*, 2001; Sundberg, 2003).

First of all, small variations at local and regional levels are simply not present in aggregated data used as facts to inform global schemes on climate change mitigation and other global environmental problems (Robbins, 2003). Using aggregated data logically leads to a simplification of land categorisations, but also of environmental change (Nightingale, 2003). In Teamon data on an aggregated level is pointless for the women. General tree cover percentages do not matter since trees anywhere other than nearby or trees that they are not allowed to use play a very small role in the women's livelihoods (*cf.* also Nightingale, 2003).

Large models to solve environmental problems sometimes even intensify the simplifications of nature and environmental change (Boyd, 2009). With increased concern and attention on climate change, with even more measurements, facts and calculations about the environment now concerning emissions, leakage, baselines and sink calculations, trees are reduced to nothing more than CO₂ sinks (Leach and Scoones, 2015). Moreover there often needs to be a story of degraded areas and a destructive local population for carbon projects to gain support, making the descriptions of patterns of change follow a certain pre-decided timeline (Winnebah and Leach, 2015). Nonetheless nature can be seen differently; maybe there has been an increase in forest cover in the last two years or there was desert there 1,000 years ago. In Teamon, the trees are dynamic and nature is not linear in its change. There are choices of what to include and what to not include in the understanding of nature and environmental change.

Secondly, nature and trees have different values and functions for different organisations, which in part depend on the scale on which the organisation is working. On the global environmental agenda, the central goal now is to stop deforestation and climate change (Adger *et al.*, 2001). This is for "the global good". Therefore the solution is for trees to be planted or to prevent trees from being cut down so that they can work as carbon sinks, and simply to see an increase in trees in the fight against deforestation. Trees only have one function. In this sense nature is seen as an object (Boyd, 2009) used for hindering deforestation and climate change. Nature and trees, as in the case of CO₂, are also abstractly

turned into a commodity that can be bought to serve certain purposes (Leach and Scoones, 2015). For the people of Teamon, just having trees in general or as carbon sinks or to stop deforestation, does not serve a purpose on its own. As this field study shows, trees serve very many different purposes and roles for the people in Teamon who use them. Trees are there to be used. Trees can of course be left standing where they are, but if there is a need to cut a tree down, it will be cut down, but with environmental consideration.

7.3 The importance of power

The differences in perceptions of reality and nature, often following the level of scale where it is formulated, are nonetheless neutral. There are differences in power over what perception is dominant and becomes the truth, and thus also leads to interventions. As described earlier, global environmental institutions have set the agenda for environmental debate and actions since the 1970s (Sundberg, 2003). Global models and narratives are communicated and modified by states and NGOs, and in the end affect local people.

First of all, there are choices about what to include and exclude in the descriptions of nature using linear explanations on consumption patterns and population growth in a limited time and space, aggregated data and categorisations of landscapes dominating the environmental arena. These are by necessity ideologically charged. For example one place can be categorised as degraded, but by others it can be categorised as part of development. Growing rice in the wetland by the women is one such example. Another example is how dominant bodies see trees as a good environmental object, while for the women it is considered as useless or even as destroying their agricultural land. Moreover, some values and functions take precedence over others. The trees in the plantation obviously serve no purpose for the women of Teamon, since they cannot use them. The plantation has its function for the global community, Sweden, the company (Green Resources) and Uganda. The problem definition of deforestation and climate change, instead of focusing on implications of forest cover loss for the local population, focuses on figures and the symbolic creation of CO₂, seeing the forest as a product and object for general humankind (Leach and Scoones, 2015).

Believing its description of the environment and the problem definition as well as its values to be the truth, the global community can make claims about what is good and bad for the environment (*cf.* Castree, 2001) involving moral claims about nature (Adger *et al.*, 2001) that contradict local practices.

Thus global concerns have implications for people at the local level since local people are the ones being portrayed as threatening the human good. Local people often have to change and adjust (Winnebah and Leach, 2015), as is the case in Teamon. Even though the consequences of environmental discourses and interventions can be beneficial to local people, as in some situations for the women in Teamon being provided with ESS and seedlings, interventions can threaten and compete with the livelihoods of the local population. In the case of CDM, it can lead to a reduction in access, prohibitions and punishments (Boyd, 2009; Lyons and Westoby, 2014), as for some women in Teamon. Hence, the discourses and global concerns of the environment can instead be a threat to local use, instead of the local being the threat to the global good. The confusion of ownerships and regulations about the plantation in Teamon are further evidence of the imbalance between perspectives and influence about how things can be governed.

There are also more general consequences with the dominant perception. In global mechanisms, such as REDD+ and CDM, it is not only in moral and symbolic terms that the forest is globally owned, but also in monetary and actual terms in a transition of resources through a commodification of nature (Leach and Scoones, 2015) and ecosystem services (Boyd, 2009). Resources that used to be accessible to local people are now, through mechanisms such as the CDM and REDD+, taken up by the global community for the sake of contributing to a global good.

8. Conclusions

The realities of firewood practices in Teamon differ from how they are represented by the body of environmental action. Firewood practices in particular, and tree usage in general, are dynamic and do not follow a simple linear pattern of consumption and population increase or decrease. It follows political, social and personal processes and natural changes. Moreover, efforts to preserve trees are embedded in the firewood practices of Teamon's women, following logics of reducing workloads, but also due to concerns for the future. The perceptions of nature in the dominant environmental discourses and the perceptions of nature at a local level differ greatly. The reason behind this is that perspectives of nature differ on different levels of scale, where a global perspective often results in simplifications of local dynamics. Agendas from a global perspective are concerned with general tree cover, but the women of Teamon care about what is happening in their direct proximity. From a global

perspective, the value of the trees is their function as a CO₂ sink, while the women in Teamon place different values on trees related to their local usefulness. At a global level, simplifications of nature and human behaviour are necessary and logically incorporated when using aggregated data. The narratives presented on a global scale are also reinforced at various levels when schemes are put in place to solve environmental problems threatening humankind.

These differences in the perception of trees and nature are not neutral however. As is obvious in Teamon, the global perspectives and agendas dominate interventions taking place in Teamon, affecting the lives of the local woman. Even though the local women can also benefit from the discourses on deforestation and climate change, as in the case of energy-saving stoves and seedlings, the plantation is not there to serve the local people. Instead, the plantation serves the agendas of global interests and are even in conflict with the women's firewood need. The global perspective creates the global truth about the environment, including its values, even though often relying on partial, aggregated satellite images and simplifications of nature.

Good and bad ways of using nature are defined from a global perspective, based on certain ideas on what trees are for, often conflicting what trees are for, for the local people.

9. References

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